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ABSTRACT

This action research project implemented and evaluated a 12-week program using cooperative learning and Multiple Intelligences to increase student motivation for learning. The targeted population consisted of elementary and middle school students in a low-socioeconomic community in northern Illinois. The problem of motivation was documented in the areas of academic achievement, incomplete or missing assignments, and behavioral problems. Analysis of probable cause date revealed that instructors did not set a purpose for learning. Educators lacked innovative teaching styles and used traditional methods of instruction. Students were not engaged in learning and lacked enthusiasm. Students' home environment discouraged motivation. A review of solution strategies resulted in selection of two major interventions: cooperative learning and multiple intelligences activities. Personal responses, learning centers, technology, and parental involvement activities were also used. Post intervention data indicated an overall improvement in grades at the primary and intermediate levels, an increase in positive behavior and parental involvement at the primary level, and fewer missing assignments. However, data indicated a decrease in acceptable behavior, and minimal parental involvement at the intermediate level. The number of missing assignments at the intermediate level also showed a considerable increase. It was thought that the older students were not accustomed to the academic freedom offered by the approach, and it was suggested that cooperative learning and Multiple Intelligences approaches be incorporated at younger ages in anticipation that younger students would be more receptive to the approaches as they proceeded through middle school. (Four appendices include a behavioral checklist and Multiple Intelligences survey. Contains 25 references.)(Author/HTH)

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MOTIVATING STUDENT LEARNING TO ENHANCE ACADEMIC PROGRESS

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ABSTRACT

This report describes a program that uses cooperative learning and Multiple Intelligences (MI) in order to increase student motivation for learning. The targeted population consisted of elementary and middle school students in a low socio-economic community, located in northern Illinois. The problem of motivation was documented in the areas of academic achievement, incomplete or missing assignments, and behavioral problems.

Analysis of probable cause data revealed that instructors did not set a purpose for learning. Educators lacked innovative teaching styles and used traditional methods of instruction. Students were not engaged in learning and lacked enthusiasm. Students' home environment discouraged motivation.

A review of solution strategies suggested by knowledgeable others, combined with an analysis of the problem, resulted in the selection of two major interventions: cooperative learning and MI. Personal responses, learning centers, technology and parental involvement activities were also used.

Post intervention data indicated an overall improvement in grades at the primary and intermediate levels. An increase in positive behavior and parental involvement were seen at the primary level. A decrease in acceptable behavior and minimal parental involvement were observed at the intermediate level. The data also indicated fewer missing assignments in the primary grades; however the intermediate missing assignments showed a considerable increase.

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CHAPTER 1

PROBLEM STATEMENT AND CONTEXT

General Statement of the Problem

The students of the targeted second, third, and sixth grade classes exhibited a lack of motivation that interfered with academic growth. Evidence for the existence of the problem included low academic achievement, incomplete or missing assignments, behavioral problems, and lack of parental involvement.

Immediate Problem Context

Site A was in a neighborhood school located in the south suburbs of a large mid-western city. The total enrollment of the school was 172 students in grades kindergarten through eighth grade. School demographics revealed the student population as Black (89.5%), White (5.8%), and Hispanic (4.7%). Eighty nine percent of the students were classified as low socio-economic. The school's attendance records were 94.8%. Site A had no truancy. The mobility rate was 38.1%. There were no limited English proficient speaking students (Illinois School Report Card, 2000).

Site A had 11 regular education teachers, a special education teacher, a Title One teacher, and a Reading Recovery teacher. The average number of years of teaching experience was 17.5. Five staff members held a Master's degree. Other staff included a principal, secretary, and two custodians. Part time to the school included a speech

pathologist, counselor, psychologist, nurse, music teacher, physical education teacher, and librarian.

Speech and language, Reading Recovery, learning disabilities resources, and Title One enhanced the core curriculum of Site A. Also offered were after school tutoring, an outdoor education program called Frog in the Bog, Kid Z-Mart (an on-line economic program), Accelerated Reading program, and a mentoring program through a local business. The administrator and staff funded and oversaw most of the students' school-related activities since there was no active Parent-Teacher Organization at the site. Math Mavericks, Student Council, Kids in Motion, and Homework Club were after school clubs available to the students.

Sites B and C were classrooms also within a neighborhood school located in a south suburb of a large mid-western city. The school had a population of 215 students in grades kindergarten through eighth grade. The neighborhood school had a racial ethnic background of 52.2% White, 29.9% Black, and 17.9% Hispanic. The attendance rate was 95.6%, the mobility rate was 12.1%, and low-income students made up 24.4% of the school. All of the students were English proficient.

The staff consisted of nine regular education teachers, two Learning Disability resource teachers, a Reading Recovery teacher, and a classroom aide. The average number of years of teaching experience was 15.1 years. Other full time staff members included a principal, speech pathologist, psychologist, secretary, and two custodians (one daytime and one nighttime). Part time staff at the school included a once a week nurse, social worker, occupational and physical therapist, three music teachers, P.E. teacher, librarian, and art teacher. There were a total of 29 staff members, both full and part time.

Five of the staff members were male. Two staff members held a Master's degree. Five members were seeking Master's degrees. The remaining seven staff members had their Bachelor of Arts degrees with continuing education hours.

In addition to the core curriculum, speech and language, counseling, occupational and physical therapy, reading recovery, and learning disability resources were available to all students who qualified for those services.

There were a variety of extra-curricular activities offered to Site B and C. These included a Builders Club, which was an extension of Kiwanis, Student Council, Conflict Resolution Club, and intramurals for grades 3-6. Also available to the students were Homework Haven, Primary Tutorial, and the Stock Market Club. The junior high students had the opportunity to participate in district sports programs, and instrument and band lessons were offered to the students in grades 5-8. The Parent-Teacher Organization (P.T.O.) was very involved in exposing children to outside community programs, including local artists, musicians, and motivational speakers. Members of the P.T.O. provided many of the classrooms with lessons in art appreciation, sponsored fundraisers, and coordinated an annual Field Day.

All three sites provided the opportunity for hot lunch and free lunch was offered to those whose families qualified. A free breakfast/lunch program was also offered during the Illinois State Bureau of Education (ISBE) funded Summer Bridges program, a 6-week program that focused on reading, writing, and math.

All three sites were located in buildings that were approximately 40 years old and were small, one story buildings. They were both neighborhood schools that had, within the last three years, been converted into kindergarten through eighth grade facilities. The

inclusion of the junior high school students to the buildings had risen the enrollment causing overcrowding. The district was in the process of adding on to all sites.

Sites A, B, and C housed one classroom per grade, one restroom for the students, a multi-purpose room used for gym and lunch, one teachers' lounge equipped with one teachers' bathroom, a main office, kitchen, and boiler room. All three sites had a nurse's office that was used for many other services as well. Sites B and C included four small special service offices and a library. Site A had relocated their library to a mobile unit in order to accommodate the inclusion of eighth grade.

All three sites used a traditional curriculum that was based on state goals and standards as well as those set by the district. Due to the low socio-economic status and high mobility rate of the students at all three sites, there was a need for educators to understand what motivated students to learn. Every effort on the part of the staff was made to provide all students from the three sites with a caring, nurturing environment.

The Surrounding Community

The school district was comprised of 12 schools in a suburb of a large Midwest city. Nine of the 12 schools housed kindergarten through eighth grade. One school had early childhood through eighth grade. One school was fourth through eighth grade. Another was early childhood through third grade. According to the School Report Card (2000), there were approximately 3,131 students enrolled in the district. The racial ethnic background of the enrolled students was approximately 52.9% Black, 33.0% Hispanic, 13.7 % White, 0.3% Asian and 0.1% Native American. The communities surrounding the district closely depicted the cultural background of the student population within the school. The racial/ethnic make-up of the 189 full-time teachers in the district was 71.4%

White, 22.8% Black, 5.3% Hispanic and 0.5% Asian. There were no Native American staff members. Of these staff members, a small percentage lived within the community while the majority lived in neighboring communities. The female-male percentage of the district staff members was 85.7% female to14.3% male. The average years of teaching experience of the teachers was 16.7 years with 76.1% having Bachelor's degrees and 23.9 % with a Master's degree or above. The pupil-teacher ratio was 19.2:1 and the average class size within the district was 19.5. This figure included all support classes, which increased the number of teachers averaged in to the class size statistic. The per-pupil expenditure showed that the district spent $4,024 per student.

The administration was comprised of one superintendent, and according to The Champion (2001), the approximate annual salary was $115,000. There were three assistant superintendents who supervised special education, business management, and curriculum instruction. The average administrator salary in the district was $71,411. There were seven school board members in the district.

Approximately 6% of the students that were enrolled in the district participated in the Limited English Proficiency Program. Eighty percent of the students were classified as low-income. The attendance rate was 93.1%, student mobility was 37.1% and chronic truancy was 4.9%.

The population of the targeted community consisted of 32,776 residents with the median age being 30.6 years old. Community demographics reported by the United States Census (2000) revealed that 45% of the population was White, 37.9% Black, 23.8% Hispanic, and 0.4% other. The community was made up of three main religions, with

Protestant being the largest congregation, followed by the Catholic and Jewish religions (Illinois Department of Commerce and Community Affairs, 1990).

The average income for the community was approximately $32,000 according to the Census of Population and Housing (1992). House values ranged from $15,000 - $250,000. Thirty-seven percent of the homes in the community were rented and 6% of the homes were vacant (United States Census, 2000). The majority of residents in the community held blue-collar jobs.

The community offered many resources to educate the students of the district. Drug Awareness and Resistance Education (D.A.R.E.) programs sponsored by the local police department were conducted at the first, second, and sixth grade levels at all three sites. Members of the local Council of Jewish Women volunteered once a week to work with at-risk students in the area of reading. Foster grandparents were utilized as helpers within the school buildings.

National Context of Problem

The problem of motivating students has generated concern at the state and national levels. Parents, educators, business people, politicians, and the general public are greatly concerned about U.S. students' poor performance on international comparisons of achievement (Brown & Walberg, 1993).

Motivation is an important aspect of learning and effective instruction. In Spaulding's study (as cited in Litchfield & Newman [On-line 2001]) it was found that students' learning is maximized when students' achievement motivation is enhanced, and the teacher's job is easier when students are motivated to learn. Many recent studies have concentrated on trying to identify variables that impact performances, however the

challenge of educators lies in utilizing these variables. Across America, in state after state, a decade of major reforms in education has failed to produce the anticipated improvement in the quality of our schools or the academic achievement of our students (Ravitch as cited in United States Department of Education, 1992).

A popular public opinion is that students' academic success depends on teachers and textbooks. However, notably missing from this debate is the motivation of the students themselves. The Office of Educational Research and Improvement held a conference to address the questions of what are students' roles and responsibilities in learning, and what educators can do to raise the amount and quality of student effort. The touchstone of the conference was the mounting imperative that all of America's students must rise to the challenge of higher standards of achievement if the nation is to continue to thrive. Ravitch also found that one conclusion cannot be overemphasized: unless the untapped power of student effort and engagement is activated and harnessed to learning, we are unlikely to realize the benefits to achievement that the new reforms aim to make possible.

The concept of motivation stands at the center of the educational enterprise (Covington, 2000). As Terrel Bell, former Secretary of Education, vigorously stated: "There are three things to remember about education. The first is motivation. The second one is motivation. The third one is motivation" (Maehr & Meyer as cited in Covington, 2000).

CHAPTER 2

PROBLEM DOCUMENTATION

Problem Evidence

In order to provide evidence for the lack of student motivation in the classroom, low academic achievement, incomplete or missing assignments, behavioral problems, and the lack of parental involvement were documented using checklists.

Three sites were included in this research. Site A consisted of 23 students in the class, 21 who were involved in the process. Site B had 13 students, all of whom were participants. Site C was a class of 26, all of whom were involved with the study. The study took place over a 12 week time period. Checklists were developed by the researchers to aid in the recording process (Appendix A). Students' academic progress for the second quarter is presented in Figures 1, 2, and 3.

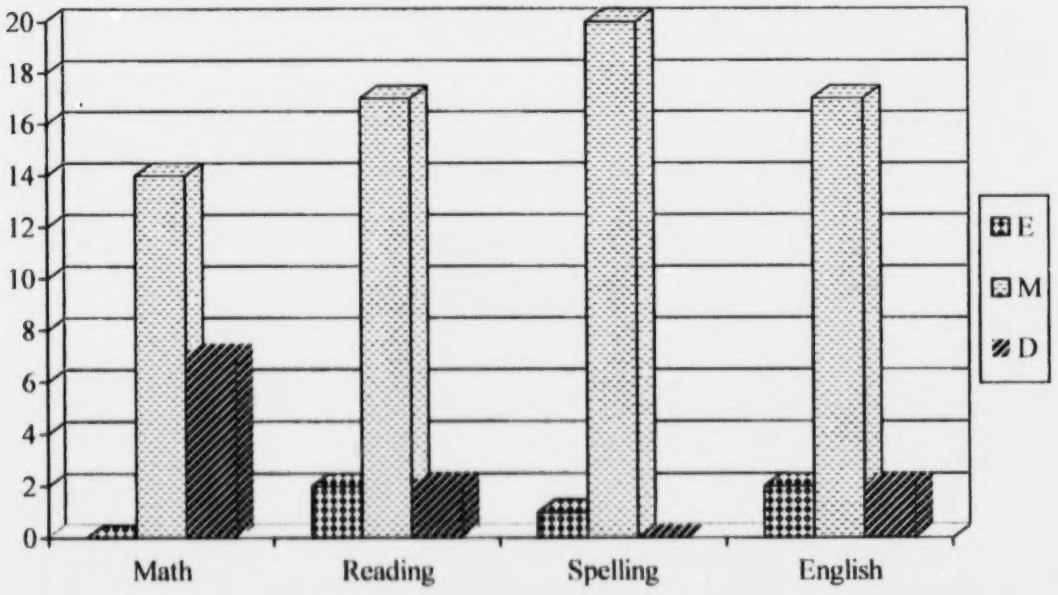

Figure 1. – Site A second quarter grades show the number of students that exceeded, met, or did not meet expectations in math, reading, spelling, and English. Of the 21 students, 14 met expectations, and seven did not meet expectations in math. In reading two students exceeded expectations, 17 students met expectations, while two did not meet. One student exceeded spelling expectations, and 20 met. In English two students exceeded, 17 met, and two did not meet expectations.

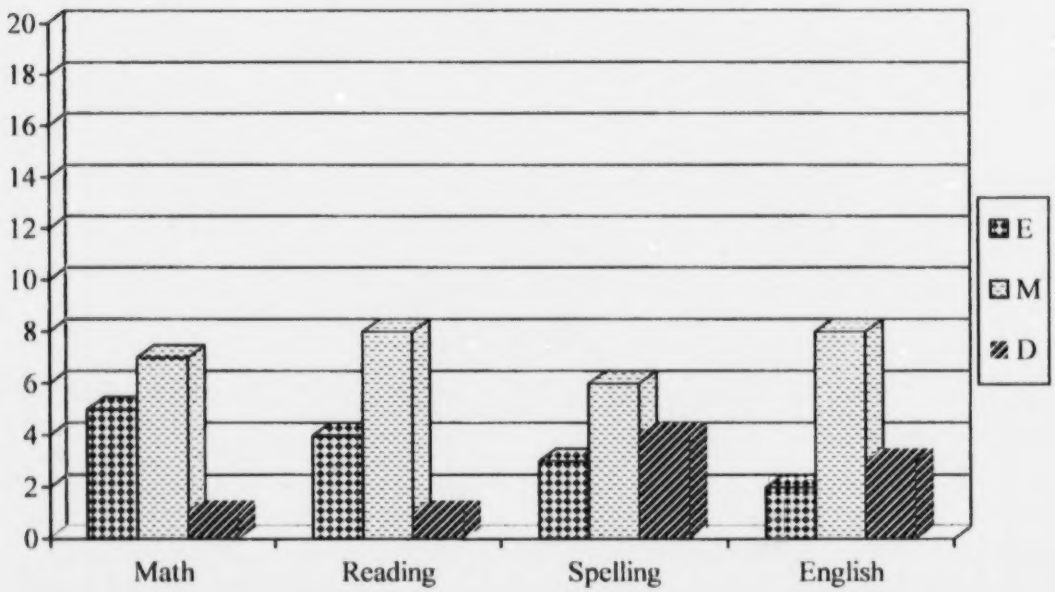

Figure 2. – Site B second quarter grades show the number of students that exceeded, met, or did not meet expectations in math, reading, spelling, and English. Of the 13 students, five exceeded expectations, seven met expectations, and one did not meet expectations in math. In reading four students exceeded expectations, eight students met expectations, while one did not meet. Three students exceeded spelling expectations, six met, and four did not meet expectations. In English two students exceeded, eight met, and three did not meet expectations.

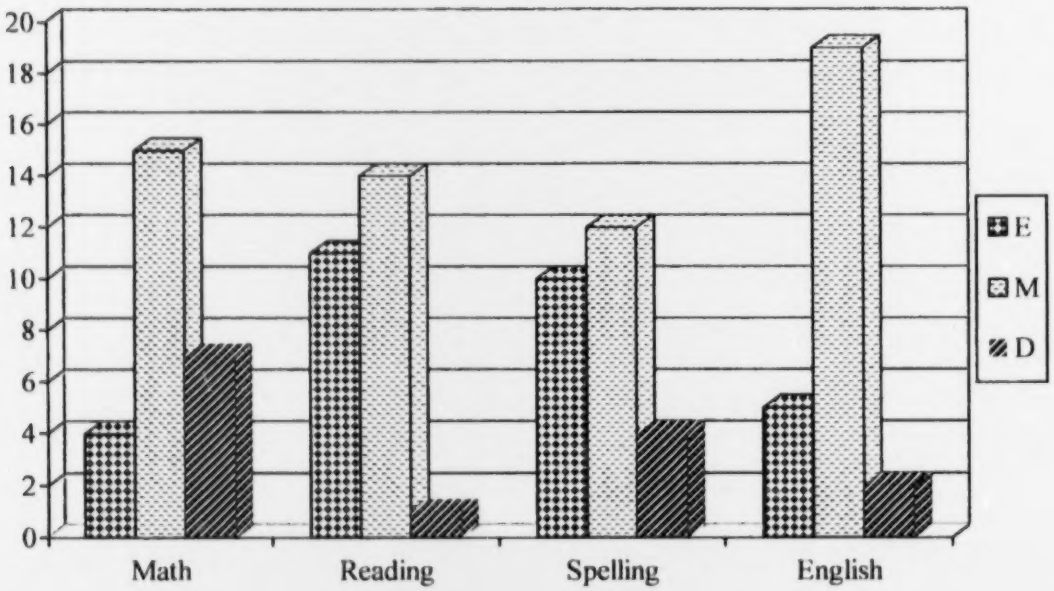

Figure 3. – Site C second quarter grades show the number of students that exceeded, met, or did not meet expectations in math, reading, spelling, and English. Of the 26 students, four exceeded expectations, 15 met expectations, and seven did not meet expectations in math. In reading 11 students exceeded expectations, 14 students met expectations, while one did not meet. Ten students exceeded spelling expectations, 12 met, and four did not meet expectations. In English five students exceeded, 19 met, and two did not meet expectations.

The next records that were examined were missing assignments for the second quarter. Figures 4, 5, and 6 show the percentage of students from each site who did not turn in required work at the planned time.

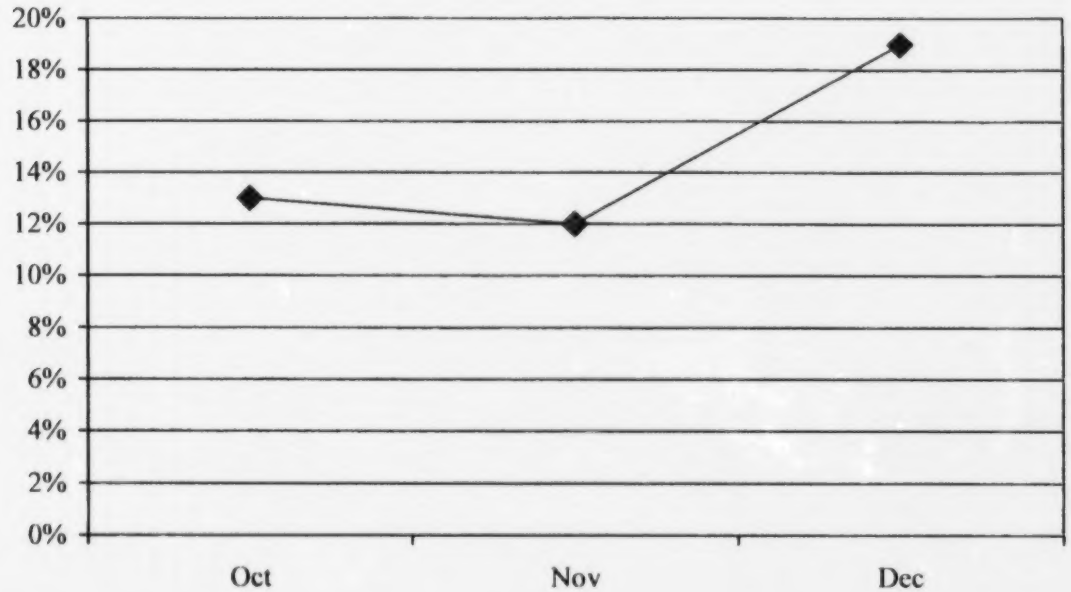

Figure 4. – Site A missing assignments records show that in October 13% of the students did not hand in the required class work at the scheduled time. The percentage dropped to 12% in November and then rose to 19% in December.

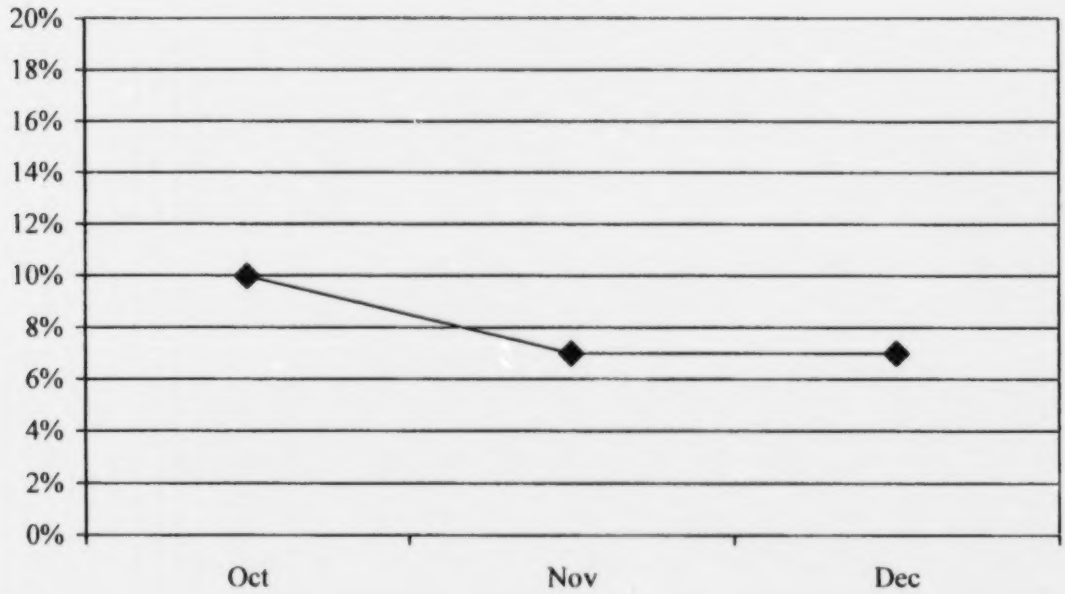

Figure 5. – Site B missing assignments records show that in October 10% of the students did not hand in the required class work at the scheduled time. The percentage dropped to and leveled at 7% in November and December.

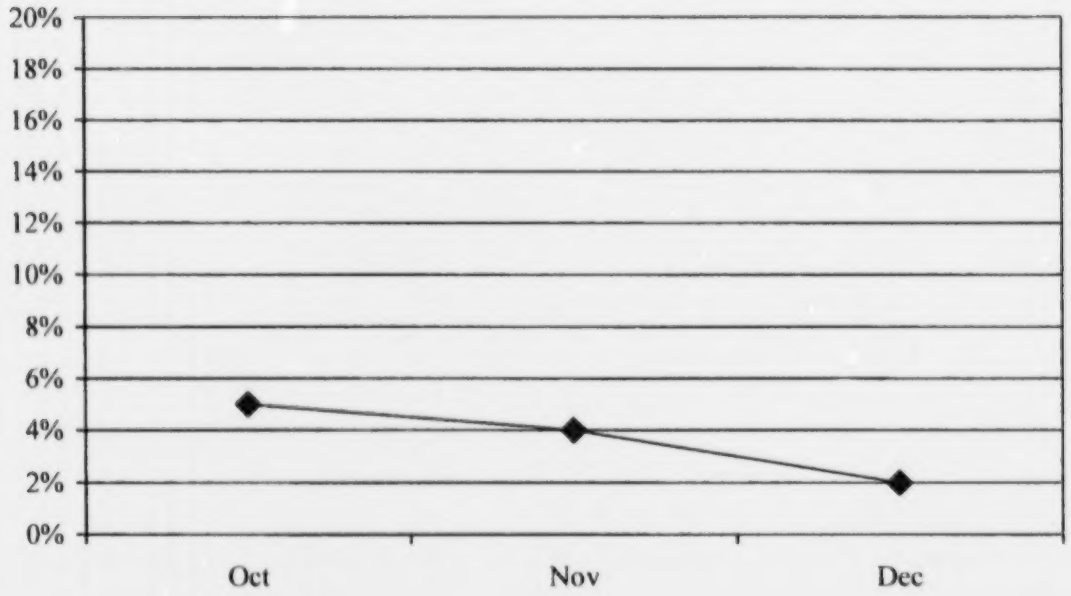

Figure 6. – Site C missing assignments records show that in October 5% of the students did not hand in the required class work at the scheduled time. The percentage dropped to 4% and only 2% in December.

A checklist was developed to document student behavior (see Appendix B). A letter was sent to the parents explaining the point system (see Appendix A). Documentation of the percentage of students who earned a reward for good behavior during the second quarter follows.

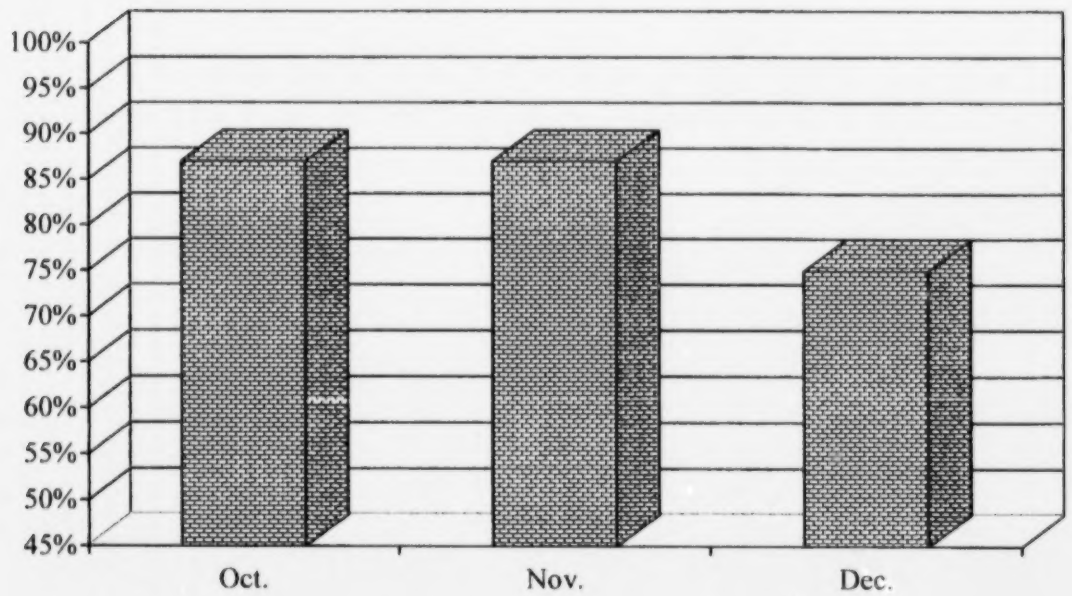

Figure 7. – Site A behavioral checklist for the second quarter shows the percentage of students earning an end of the month reward for good behavior. In October and November 87% of the students earned the privilege of attending a monthly movie. In the month of December 75% of the students were rewarded with a monthly movie.

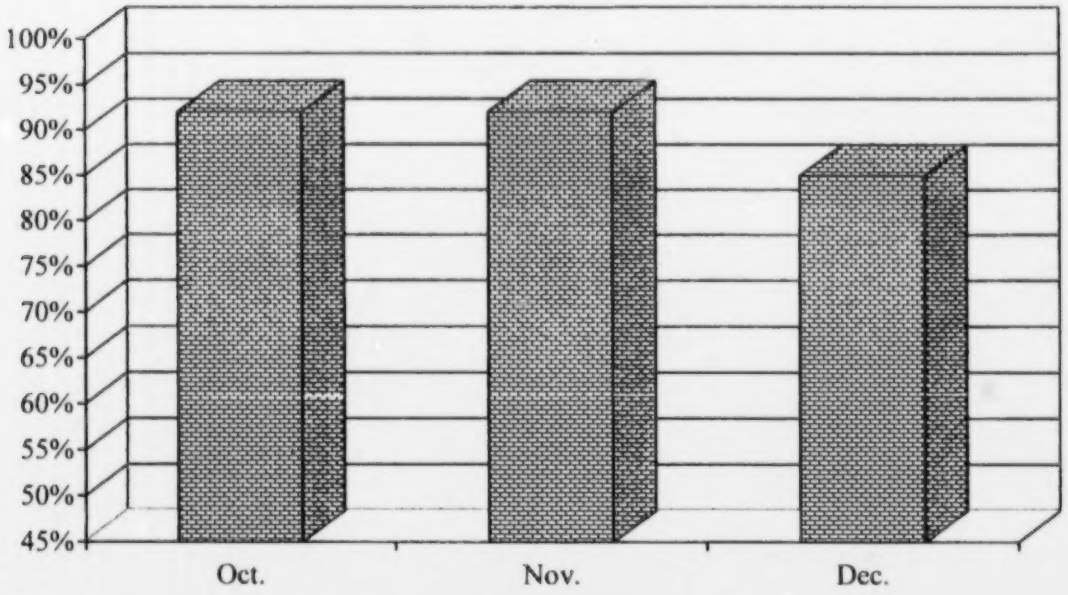

Figure 8. – Site B behavioral checklist for the second quarter shows the percentage of students earning an end of the month reward for good behavior. In October and November 92% of the students earned the privilege of attending a monthly movie. In the month of December 85% of the students were rewarded with a monthly movie.

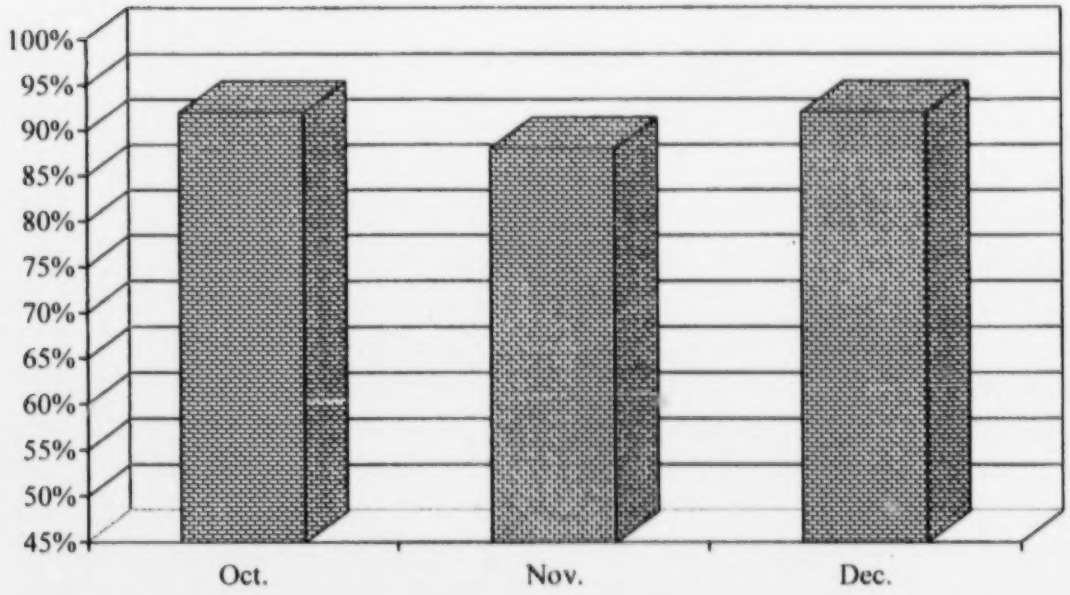

Figure 9. – Site C behavioral checklist for the second quarter shows the percentage of students earning an end of the month reward for good behavior. In October 92% of the students earned the privilege of attending a monthly movie. In the month of November 88% of the students displayed behavior that earned them the reward. The percentage rose back up to 92% in December.

The researchers of this study set out to find underlying causes for the lack of motivation in students to learn. Motivation can be described as the desire to achieve a goal that has value to the individual. There have been many opinions as to why students lack motivation. One of these views was, "Clearly too many students think school is boring and they see little connection between school learning and their lives outside the classroom. Consequently, many experts in the field have identified lack of student motivation as one of the primary causes of low achievement levels" (Tomlinson as cited in Hootstein, 1994, para. 6). Due to the emphasis on achievement at both state and district levels, finding a cause to low motivation in students is imperative.

One of the most researched areas in motivation focuses on the fact that many students do poorly on assignments and in participating in the classroom due to the fact they do not understand what to do and why they should do it. Educators are not spending enough time explaining why they teach what they teach and why the topic is important and worthwhile. Students who are unclear about what to do will rarely perform to the educator's expectations. If a child has no purpose for learning, a lack of motivation often exists. Therefore, if teachers do not set a purpose for learning, a non-motivating environment will be created (Harris, 1991).

Educators have recently come to understand that a lack of innovative teaching approaches discourages student motivation (Greenberg as cited in White, 1998, para. 2). Research has shown students need to be actively involved in their learning process in order to comprehend complex concepts and take ownership of their work. Unfortunately, some experienced educators do not like to change their practices. When teachers merely lecture or assign textbook reading, students often become passive recipients of

information rather than active participants. Being a passive learner diminishes the desire to learn. When schoolwork is not engaging the students, it does not stimulate their curiosity or allow them to express their creativity. It has been shown that students want and need work that enables them to demonstrate and improve on their competence as successful students. One of the major keys to motivation is the active involvement of students in their own learning. Students are not actively engaged in their learning resulting in a lack of motivation (Strong, Silver, Robinson, 1995).

Since the majority of educators continue to use traditional methods of teaching, those non-traditional learners are less motivated (U.S. Department of Education, 1992). Schools are filled with teachers who were trained in one methodology, that being direct instruction. Teachers tend not to be risk takers due to the fact that they feel accountable to teach the basics. Teachers are apt to go with what they know works with the majority of the students without regard to those students who do not learn in traditional ways. If an educator's teaching methods are non-motivating and uncreative, students model this attitude and it is reflected in their own learning practices. Whatever level of motivation students bring to the classroom will be transformed by what happens in the classroom. Therefore, if common methods of teaching, such as direct instruction and lecturing are solely used, students' creativity and motivation are stifled.

Another probable cause to the lack of motivation is the other half of the learning equation, the students themselves. There are many factors that affect a student's motivation to learn. These factors could include students' perceptions of the subject matter and its purpose, their longing to succeed, and their level of self-confidence. " And,

of course, not all students are motivated by the same values, needs, desires, or wants" (Davis, n.d., para. 2).

Students all seem to have different levels of enthusiasm. This variation in student motivation is possibly due to the fact that some children have a natural desire to learn, while others need to be challenged and stimulated by their teachers. Students all have different reasons for their desire to learn; therefore their motivation depends on their own separate life situation. Students have different life experiences that have shaped them into the individuals they are. These experiences could have been either productive or detrimental to the shaping of their motivation. Every teacher knows that each student is different physically, emotionally, and morally. These differences can all be attributed to a student's desire to learn. It has only been recently that researchers are discovering that students need to find their own personal meaning to the material that is being taught in order to have the motivation to learn. Therein lies one of the probable causes to the lack of motivation.

One of the most influential factors in the development of student motivation is the student's home environment. The home environment is the building block that helps to develop motivation for learning. A positive, nurturing home that encourages children to ask questions and to seek out their curiosity is key in the development of motivation for life long learning. Unfortunately, many students come from a home life that is not favorable to learning. Many households consist of either parents who both work, or single parent families. The time that these parents can offer to their children is minimal. Studies suggest that lack of parental involvement hinders student attitudes toward school,

homework habits, school attendance, and overall level of academic achievement (Astone & McLanahan, 1991; Epstein; Lareau; Stevenson & Baker as cited in Feuerstein, 2000).

CHAPTER 3

POSSIBLE SOLUTIONS

Literature Review

Solutions to the problem of low motivation in students are numerous, yet are often expected from classroom teachers. Students seldom walk into a class without a desire to learn. Teachers need to begin by identifying with the individuals in order to find where the students' interests lie, then decide how they can pique that enthusiasm using a variety of strategies and innovative approaches as well as modeling this excitement for their students. Research has shown that good everyday teaching practices can do more to offset student indifference than special efforts to address motivation directly.

One of the first steps teachers need to take includes giving students the desire to be autonomous life-long learners. Educators must assist their students in finding personal meaning and value in the material being taught. At an early age children need to feel that they are valued members of a learning community and that their knowledge will remain with them through adulthood. This is only the beginning stage of helping students acknowledge that they are life-long learners.

Creating an emotional climate that addresses student interest, student success, and student feedback is a necessity to foster students' beliefs that learning is an ongoing process. Clearly, students are motivated by their interests. In order to stimulate that

interest, teachers should allow students to work on projects that are relevant to them and can be applied to real-life situations.

"Establishing an emotional climate of success is also crucial to maintaining student motivation" (Desrochers and Desrochers, 2000, para. 9). Teachers need to develop content that makes students feel they can succeed. Prior to instruction and application of the knowledge, students need to know what is expected from them in order to succeed. Educators need to make their goals clear to their students to help avoid confusion and fear of failure. In turn, students will become more self-sufficient learners who are willing to take risks and apply their knowledge to other experiences and situations.

Studies have shown that teachers' expectations have a powerful effect on students' motivation and performances. When teachers act as though they expect their students to be motivated, hardworking, and interested in an assignment, the students are more likely to respond in that manner. Instructors need to set high enough standards for their students to motivate them, yet they need to make the expectations realistic enough to avoid frustration by the students. "To develop the drive to achieve, students need to believe that achievement is possible-which means that you need to provide early opportunities for success" (Forsyth and McMillan as cited in Davis, 2001, para. 8).

Student feedback must be given frequently and in a variety of different ways in order for students to see the relevance of their work as it pertains to real-life situations. Children and adults respond to and are motivated by feedback. Feedback gives us the opportunity to see what we are doing well and how we can improve. Whether the feedback comes from the teacher or peers, or is self-generated, its purpose to have students

reflect on what they've done is a large part of instilling life-long learning practices in individuals.

It is critical that teachers effectively manage their classrooms with a high degree of student interest, student success, and student feedback with every lesson or unit they present to their class. These factors help create a positive learning environment and assist students in seeing that everything they do has importance to the journey they take as life-long learners.

Teachers must be willing to stimulate learning within the classroom. They should foster an environment in which everyone has a sense of belonging. It is here that students are eager to participate in the learning process. Students need to be active participants in learning. Therefore, innovative teaching approaches are needed to encourage motivation and let students take ownership in their own learning. Students can be involved in choosing some of the topics to be studied. By doing this, they would be engaged in the topic because it is one that they find appealing. Teaching strategies should be varied and should accommodate many of the different learning styles. Forsyth and McMillan (as cited in Davis, 2001) summarized:

> Variety reawakens students' involvement in the course and their motivation. Break the routine by incorporating a variety of teaching activities: role-playing, debates, brainstorming, discussion, demonstrations, case studies, audiovisual presentations, guest speakers, or small group work (para. 17).

Another example of an innovative classroom approach would be outcome-based learning. This strategy allows the slower students to experience success without having to

be in competition with the faster students (Raffini as cited in Renchler, 1992). Students are able to work at their own pace in order to complete a task without feeling the pressure that often times leads to low motivation and failure. Students focus on the outcome rather than the time in which they have to complete an assigned task.

Motivation leads to success. When students are motivated, they are more likely to do well in performing and completing a task. This is true for school lessons as well as the completion of standardized tests. For many students, the taking of standardized test has no meaning. There is no motivation behind it and often times students do not even see their results. If highly motivating instructions could be given to students, the content of school lessons and standardized tests could be brought into closer correspondence, making the tests more plausible (Brown and Walberg, 1993).

In this day of testing, teachers often get lost in the preparation leaving very little time, if any, for fun activities and lessons. Students respond and are highly motivated when fun is added into the mix. When students are having fun and learning, motivation is at its peak (Hanson, 1998). Fun and engaging activities should be brought into the classroom to help foster motivation.

Methods that were used to capture students' attention years ago are not necessarily holding in this day of technology and cultural changes. Teachers have found that the traditional methods of instruction are resulting in unmotivated students. Students are to conform to the teachers' learning environments instead of teachers understanding students' learning styles. Educators can enhance students' learning experiences by offering a classroom in which non-traditional teaching methods are implemented.

One of these non-traditional methods includes the implementation of cooperative learning. Unlike the typical style of teaching in which instructors have one task that is learned at one time, cooperative learning weaves a higher order of thinking into the lesson. Cooperative grouping has individuals contributing to a group goal. When students feel a sense of responsibility toward their peers they become motivated (Nussbaum as cited in Lumsden [On-line 2001]). Cooperative learning experiences, when used as a single strategy, are overwhelmingly positive. Moreover, when cooperative learning is combined with other strategies, students are challenged to think more skillfully, solve problems, and most importantly, generate new concepts. The cycle of motivation seems to begin when an individual student within a group rises to the occasion and achieves success in a challenge or task to without which a group could not achieve their goal. Success then proceeds to be absorbed into every aspect of the students' lives, continuing the cycle of motivation.

One of the theories that has been presented to the educational field in an attempt to understand learning differences and styles is Multiple Intelligences (MI). Howard Gardner's theory of MI holds that every individual possesses several different and independent capacities for solving problems and creating products. Hence, children's learning styles are based on how they are nurtured throughout their lives, including how they are culturally nurtured. Children are said to have one or more of eight intelligences in which they tend to be stronger in and therefore learn by. When a teacher only instructs in a way that uses a particular intelligence, those students who are weak with that intelligence tend to become frustrated and eventually unmotivated. A solution to sparking students' motivation would be to integrate MI theory into the curriculum. According to Silver,

Strong, and Perini (1997), the integration of learning styles and MI theory may minimize their respective limitations and enhance their strengths.

As the cycle of motivation continues to gain momentum, students gain confidence in their abilities, as well as, increase their motivation to discover other talents and new avenues of learning. Students observed to be actively engaged in their learning improved their cooperative skills, effectiveness, and leadership skills. As self-assurance was built students transferred their newfound attitudes into their daily lives. According to Campbell (1990), "parents reported frequently that behavior improved at home, more positive attitudes about school were exhibited, and attendance was increased" (para. 10). Parents are a key element in the success of students. Therefore, when students are content and enthusiastic about their learning, parents are rewarded as well, and the cycle continues.

It is imperative that students understand the purpose and relevance of what they are learning to help keep them motivated in their studies. Research has shown that many students do poorly on assignments or in participation because they do not understand what to do or why they should do it. Likewise, students who are certain about what to do understand why we teach what we do, and why the topic, approach, or activity is important, interesting, and worthwhile (Harris, 1991). Students who identify with this process also become aware of the teacher's enthusiasm being conveyed to them, and will more likely become interested in the content or activity presented.

Therefore, teachers need to be passionate about what they teach their students. If a teacher does not communicate an excitement for what is being taught, their students may never identify with the reason for their learning. Teachers must model the same

enthusiasm they hope to see in their students if they expect a justification for learning from their students to be acquired.

When students understand a purpose for learning, they find personal meaning and value in the material taught. Experience has educated us that students who understand their own learning styles, develop flexibility in their thinking, and set realistic goals maximize their strengths in learning. Brown (as cited in Silver, Strong, & Perini, 2000) noted:

> In fact, research on the importance of metacognitive thinking supports the notion that instructional approaches that help students reflect on their own learning processes are highly beneficial to their overall learning and tend to stimulate motivation to improve as learners (para. 12).

When students engage in this kind of "thinking about thinking", they become more self-directed and see the purpose of what they are learning. In turn, this leads to greater self-awareness in the students and helps them understand their own strengths and weaknesses as learners so that they can grow and become more balanced.

When teachers make first experiences positive ones for their students, their purpose for learning is instilled from the start. Tomlinson (as cited in Palardy, 1997) stated, "The adage that first impressions are the most lasting is equally true when it comes to motivating children to learn. We know that the first time students experience something new or in a different context, they form initial impressions that can have long-term effects" (para. 10). It is crucial that educators make special efforts to guarantee that these first impressions are not only positive but also satisfying. Every attempt for students to realize the purpose of their learning needs to be made to keep motivation at a high level.

Keeping a purpose for learning in the forefront of an educator's planning aids students to develop the same practices in their daily performances.

Student engagement is key in the development of motivation. Students need to feel responsible for their own learning. It is the students' obligation to want to become competent learners. One way to engage students in their learning is for teachers to give student feedback often. It is necessary for teachers to build lessons that include student feedback. Often when feedback is not given, students misinterpret the objectives of the lesson. Learning becomes unimportant and has no meaning. Feedback should be given frequently and in various ways. Checklists and rubrics allow students to see all the required components of an assignment and give them the chance to check off tasks as they are completed. Peer discussion and peer editing give students an opportunity to get feedback from those who are in the same situation as they are. Often students feel more comfortable and are more willing to take positive criticism from those in their own age group. Student-teacher response journals also work well when promoting feedback. All humans are motivated by feedback that answers the questions, "What am I doing well?" and "What areas do I need to improve?" (Desrochers and Desrochers, 2000, para.11).

Although students cannot determine what should be taught in school, they can and should be involved in setting objectives. Allowing students to help set goals and objectives, both short and long-term, gives them a feeling of empowerment and investment (Long as cited in Palardy, 1997), two conditions that long have been recognized as producing increased interest, commitment, and effort (Frymier as cited in Palardy, 1997). It is important for students to have a choice as to what they want to learn.

Students are more inclined to learn and be highly motivated when their ideas are taken into consideration.

Over and over again teachers feel the need to protect their students from failure and often times lower their expectations. Students must be pushed to their full potential in the classroom. Each classroom should be filled with active participants engaging in meaningful activities. It is with this engagement that significant learning takes place. Nelson-Le Gall (as cited in the U.S. Department of Education, 1992) suggested:

> What is being suggested here is that motivation not be seen as something existing solely in the student that he or she brings to the classroom and academic tasks, but rather as an outcome of meaningful participation in the classroom and the social practices that accomplish its everyday practical activities (para. 41).

Students must be encouraged to become active participants in their own learning. Students learn by doing, making, writing, designing, creating, and solving. Passivity dampens students' motivation and curiosity (Lucas as cited in Davis, 2001).

Discovering answers to the questions on effective ways to motivate students has been researched and studied for decades. The question on whether academic expectations should be used to set students' learning directions or allowing students to set their own goals is a long-standing debate. The difference between the two sides lies in the fact that academic expectations are often defined by standards set by teachers, whereas goal-setting is the level of achievement the students establish for themselves. Goal setting is therefore a target to which students aim for, unlike academic expectations that are a standard that

must be met. This is where motivation, a desire to achieve a goal that has value for an individual, evolves.

Researcher, Lowell Madden, set to find out what was motivating students to learn and in doing so he surveyed over a hundred teachers. Based on their classroom experiences and their own perspective on the nature of learning, the teachers shared their findings. One of the strongest findings was that, "Students work more diligently on self-made goals than from the expectations of others" (Madden, 1997, para. 48). Of course, self-made goal setting is not effective in and of itself. There must be appropriate feedback from the teachers, as well as, continuous teacher support in order for students to be motivated to learn in a student-made goal environment.

Once the environment is established, students need to become engaged in their work. Work that children seem to find totally engaging is work that has stimulated their curiosity and allowed them to express their creativity. This need to express originality awakens their desire for a greater understanding. "Students want and need work that permits them to express their autonomy and originality, enabling them to discover who they are and who they want to be" (Strong, Silver, and Robinson, 1995, para. 26). This aroused curiosity motivates children to learn. Unfortunately, schools usually view creativity or self-expression as a form of play, and feel that the standards and seriousness of learning fail. This in turn makes creative work meaningless. Students' drive toward self-expression is ultimately a desire to produce work that is valuable to others. What has started out an intrinsic form of motivation, a student's internal desire to understand and learn, has turned in an extrinsic motivator to please and share with teachers and classmates. Extrinsic motivation includes many things that the educator can do, including

grading, encouragement, and rewards. Because all students are different in their abilities and experiences, their levels of intrinsic motivation are varied as well. "Students who do not yet have powerful intrinsic motivation to learn can be helped by extrinsic motivators in the form of rewards" (Harris, 1991, para. 3). Extrinsic rewards can be tailored to the level of the student. Once a teacher understands and gets to know the students, rewards can be appropriately delegated. Knowing that they will be fairly treated and rewards will be given accordingly, students will feel safe in their learning. Teachers need to understand the equal treatment does not necessarily involve same treatment, but rather a reward that respects the needs of each learner. Understanding the differences in student motivation is a step toward solving the problems that are related to lack of motivation.

In the continuing cycle of motivation, literature reviews suggest that schooling outcomes and student motivation are greatly influenced by family background. One of the links that was evident between family background and student achievement was parent involvement in learning process. However, studies of parent involvement have not given a clear understanding of the reasons that encourage parents to become involved in their children's education. Due to the fact that parent involvement includes a wide range of behaviors, from parent-child discussions of homework to attending P.T.A. meetings, researchers could not be specific enough to measure parent involvement in a statistically meaningful way. Fortunately, there have been several quantitative measures of parent involvement that have been developed. These measures fall under the communication category. Parents play an important role when they contact the school and receive information that relates to student progress, volunteer opportunities, and general understanding of the school's objectives. According to Feuerstein (2000), "Parental

involvement is considered to be an important variable associated with student success in school" (para. 41). Students' successes are a catalyst to motivation.

The following process objectives, processes, action plan, and assessments were developed in the fall of 2001.

Project Objectives and Processes

As a result of the use of multiple intelligences and cooperative groupings, during the period of January 2002 to April 2002, the second, third, and sixth grade students from the targeted classes will increase their motivation for learning as measured by academic progress, behavioral checklists, homework checklists, and family involvement checklists.

In order to accomplish the project objectives, the following processes are necessary:

1. Materials that foster cooperative learning and MI will be developed in language arts, mathematics, health, science, and social studies.
2. A series of learning activities that address cooperative learning and MI will be developed for all subject areas.
3. Curricular units reflecting these decisions will be constructed.
4. Learning centers will be created to foster self-motivation.
5. Reflection portfolios will be distributed and utilized during the project.

Action Plan

This action plan has been developed to cover a 12-week period. The following strategies have been selected to heighten the students' motivation for learning:

Cooperative Learning

Multiple Intelligences

Personal Responses

Parental Involvement

Technology

Learning Centers

Week One

Rearrange classroom

Set up Learning Centers

Post and review cooperative learning guidelines

Review homework policy, rewards, and consequences

Week Two

Administer MI Inventory to determine strengths and weaknesses

Form cooperative groups based on the results of the MI Inventory

Explain Reflection Portfolios that students will create

Introduce the theory of Multiple Intelligences to students

Week Three

Introduce Intrapersonal Intelligence

Create "Me T-Shirts"

Students create a Heritage Book about their families

Daily Animal Analogies

Reflection on working with the Intrapersonal Intelligence

Intrapersonal center activity

Week Four

Introduce Interpersonal Intelligence

"Two Truths and a Lie" activity

Cooperative groups create a commercial to promote a product

Interview a family member

Reflection on working with the Interpersonal Intelligence

Week Five

Introduce Verbal/Linguistic Intelligence

Problem of the Day (center activity) to be completed in pairs

Story Time, Independent Reading, and Guided Reading

Cooperative groups will create a group book

Incorporate technology (Storybook Weaver)

Reflection on working with the Verbal/Linguistic Intelligence

Week Six

Introduce Musical/Rhythmic Intelligence

Set up listening center activities

Cooperative groups will create a song, rap, or poem

Create homemade instruments to accompany

"The Beat Goes On" – Younger students move streamers to the beat of changing songs. Older students create a beat and tap it.

Reflection on working with the Musical/Rhythmic Intelligence

Week Seven

Introduce the Visual/Spacial Intelligence

Set up Visual/Spacial center

Draw a setting to a descriptive story that is read to them

Create a board game to go along with a story using cooperative groups

Reflection on working with Visual/Spacial Intelligence

Week Eight

Introduce Logical/Mathematical Intelligence

Set up Logical/Mathematical center

Work cooperatively to complete puzzles and brain teasers

Use a variety of graphic organizers

"Who was that?" activity – attribute web

Personal shape analogies

Reflection on working with the Logical/Mathematical Intelligence

Week Nine

Introduce Bodily/Kinesthetic Intelligence

Set up Bodily/Kinesthetic center

Put on a play in cooperative groups

Charades with spelling and vocabulary words

Kick-box word wall words

Trace bodies and add features

Reflection on Bodily/Kinesthetic Intelligence

Week Ten

Introduce the Naturalist Intelligence

Set up naturalist center

Field trip to Irons Oak Nature Center

Create a picture window of an assigned habitat using cooperative groups

Invite a guest speaker with a unique pet

Reflection on the Naturalist Intelligence

Week Eleven

Re-administer the MI Inventory

Final Reflection

Week Twelve

Compare, contrast, and record the results of pre and postchecklists to measure the effectiveness of implementing MI into the classroom

Methods of Assessment

In order to effectively assess the results of the intervention, a teacher-constructed checklist will be developed to monitor students' behavior. A second checklist will be developed to track students' completion and timeliness of homework assignments. A Multiple Intelligence Inventory will be administered prior to and after the implementation of the action plan. Weekly student reflections will allow students to recognize their strengths and weaknesses in learning.

CHAPTER 4

PROJECTS RESULTS

Historical Description of the Intervention

The objective of this project was to motivate student learning to enhance academic progress. The implementation of multiple intelligence (MI) activities, cooperative learning, and parental involvement were selected to effect the desired changes.

Multiple intelligence activities were incorporated into daily curriculum to increase student engagement. The researchers focused on one multiple intelligence each week of the action research project and designed at-home activities to correspond with that intelligence. Activities for each intelligence were intended to last the span of a week, however, due to unforeseen interruptions such as state testing and spring break, the intervention was extended in order to accommodate each of the intelligences. A field trip that had been planned was canceled due to inclement weather and was unable to be rescheduled. Some MI activities carried over into the following week as a result of overly ambitious planning.

Site A

The first week of the action research implementation included physically changing the setting of the classroom in order to foster a cooperative learning environment and learning centers. The instructor reviewed and posted cooperative learning guidelines. Homework policy, as well as, rewards and consequences were

reviewed with the students. The policies were also sent home to parents in written form (Appendix A).

The second week was spent introducing the theory of MI to the students. An overall description and example of each intelligence was presented and discussed with the students. The teacher-researcher then administered an inventory to determine MI strengths and weaknesses (Appendix C). Based on the results of the MI inventory, cooperative groups were formed and posted as a display. During this week, the students were trained in keeping a reflective journal. A discussion about the way thoughts, feelings, frustrations, as well as, successes are expressed was conducted. The teacher modeled journaling and M.I. journals were supplied to each student.

The next 8 weeks focused on the eight different intelligences of Howard Gardner's theory of Multiple Intelligences. As a way to get parents and families involved in recognizing and supporting their children's learning capabilities, an at-home activity for each intelligence was designed and sent home each week. The weekly projects were sent home at the start of each week and subsequently returned at the end of that week. Records were kept to show the percentage of students and their families who participated in the weekly take-home projects.

In weeks 3-10, the eight different intelligences were introduced on a weekly basis. The focus intelligence was integrated into daily lessons in all subjects, except for social studies, which was not taught by the teacher-researcher. Daily lessons in reading, math, spelling, science, and English were planned and conducted using that week's focus intelligence. Each week also included completely focused activities for that particular

intelligence. Grades were taken and recorded for both subject area activities, and the MI-focused activities.

Throughout the implementation of the action plan, technology was utilized through the use of laptop and personal computers. Different programs were introduced to the students according to the focus intelligence. The teacher's discretion was used to determine when and who was able to enjoy this privilege.

At the completion of each week, the students were asked to reflect on their experiences with the focused intelligence. After a review of the week's activities, failures, successes, and frustrations in an open discussion, the student were required to reflect on the past week. The students were to reflect on their feeling of that particular intelligence and how it related to their own learning.

The last two weeks of the action plan, the teacher re-administered the MI inventory that was given at the beginning of the research in order to help the students re-evaluate their style of learning. In order to help the students express their MI journey, the researcher had the participants complete a final reflection (Appendix D). The final week of the action plan was used to compare and contrast the results of pre and postchecklists in order to measure the effectiveness of implementing MI into the classroom.

Site B

Week one was spent rearranging the classroom in order to make easier transitions to cooperative groups and learning centers. Letters were sent home to the parents informing them of the implementation of the action research project at Site B. The teacher researcher set up a learning center in the classroom planning activities to focus on the multiple intelligence covered each week.

Cooperative learning guidelines were posted and reviewed daily during the one-week period, as were homework and behavioral policies, their rewards, and consequences. Cooperative learning guidelines included listening to others without judging, encouraging others, assisting others as needed, rebuilding on ideas, and noticing how well groups worked together noting how improvements could made. Students were given a copy of the guidelines and policies to review at home with their parents (Appendix A). The researcher created a monthly chart to document and monitor the students' behavior.

The theory of MI and its components were introduced and explained to the students at the onset of the second week. Examples of activities to be conducted and thorough discussions including a question/answer period about MI took place. An MI inventory was given to the class to determine the strengths and weaknesses of the students in MI intelligences (Appendix C). The teacher researcher charted the results and cooperative groups were then formed based on the results of each student's strongest multiple intelligence. An explanation of how to write reflection portfolios took place throughout the week. The teacher researcher modeled metacognitive thinking aloud and demonstrated journal writing to the class. A discussion regarding the way thoughts, feelings, successes, and frustrations are conveyed was reviewed daily. The students were given their MI journals at the end of the week to personalize and decorate.

Although parental involvement had not previously been documented, a weekly at-home activity for each of the intelligences was assigned to the students in order to get the families involved and cognizant of their child's preferences to learning. The at-home projects were assigned on Monday and were to be turned in at the end of the week. The

teacher kept a checklist of the assignments in order to document participation by the families.

Weeks 3 through 10 of implementation were designed to focus on one of the eight multiple intelligences Harvard researcher Howard Gardner believes every individual possesses. Each of the intelligences was reintroduced on a weekly basis. In order to reinforce the attributes of each intelligence, classroom lessons and activities concentrated on the intelligence of the week. A learning center with independent MI activities was made accessible to the students on a daily basis. Some regular curriculum lessons were substituted with cooperative group activities. Daily lessons in all subjects were revised to incorporate the intelligence the class was focusing on for the week. Authentic assessment and rubrics were used more often in recording grades for subject area activities as well as MI focused activities. The teacher, in order to record the completion of graded and ungraded assignments, kept a checklist.

Technology was integrated throughout the action research project. Several lessons of direct instruction by the teacher were presented over the Internet to the students. Cooperative groups worked at the computer weekly using such programs as Math Keys, Storybook Weaver, Microsoft Word, and other programs that directly addressed the multiple intelligences.

At the conclusion of each week, the students were requested to reflect on their experiences with the focused intelligence. As a class, the week's activities were reviewed and listed on the board. The students were then asked to relate their likes, dislikes, and interesting observations made when working with the intelligence into their journals. This

second grade class inquired about illustrating their favorite activity as well as writing about it. The illustrations were added to their journals.

During the last two weeks of the action research project, the teacher researcher re-administered the MI inventory that was given at the onset of the implementation. The researcher again charted the results, giving the students an opportunity to re-evaluate their styles of learning. The students, allowing them to reflect on their MI experiences, completed a final reflection (Appendix D). Pre and postchecklists on behavior, grades, and assignments were compared the last week of the action plan in order to measure the value of incorporating MI into the classroom. Implementation of the action plan lasted two weeks longer than expected due to a week of achievement testing and ISAT testing.

Site C

Weeks 1 and 2 were used to set up the classroom and learning center area. A review of the cooperative learning guidelines and homework policy, rewards, and consequences were given to the students at this time (Appendix A). A MI inventory (Appendix C) was administered to determine the strengths and weaknesses of each student. Cooperative groups were formed based on the results of the MI inventory. The instructor explained the reflection portfolios that were to be completed after each week of the plan. The students were then introduced to Gardner's theory of Multiple Intelligences.

Beginning the third week, students were introduced to the Intrapersonal Intelligence. Students created "Me T-Shirts" that showcased each child's uniqueness. A daily journal writing activity called Animal Analogies allowed the students to choose an animal with positive characteristics and compare the animal to themselves. An at-home project was designed to have the child work with his family to create a heritage poster

that celebrated the family's heritage. The posters were displayed in the classroom. Out of the 26 students in the class, 25 of them completed the at-home assignment with their families. At the end of the week, all students reflected on the week noting whether or not they liked the activities.

Week 4 focused on the Interpersonal Intelligence. Students participated in an activity called "Two Truths and a Lie" in which each student told two true statements about themselves and one lie. The rest of the class had to guess which statements were truths and which was the lie. Another activity involved the cooperative groups creating a commercial to promote a product. The at-home activity for this intelligence was to interview a family member. Of the 26 students, only three did not complete the at-home project. A weekly reflection was completed by each student.

The Verbal/Linguistic Intelligence began the fifth week of the plan. Activities included story time, which incorporated technology by the use of computers, independent reading, and guided reading. A Problem of the Day was set up as a center activity to be completed as pairs. Cooperative groups created a group book in which the story elements were decided on by all members of the group. The at-home project was assigned in which each student used the letters in their first names and created a mobile of which the student as well as their parents had to think of adjectives that described the student. The 20 mobiles that were turned in were very creative. Each student completed a reflection at the end of the week.

In the sixth week of the plan, the Musical/Rhythmic Intelligence was introduced. The students participated in an activity called "The Beat Goes On". In this activity, a variety of musical arrangements were played and each student was asked to move their

streamers to the beat of the changing songs. A listening center was set up with an assortment of musical genre. In cooperative groups, students were asked to design a song, rap or poem to be performed in class. Some of the students felt comfortable with this assignment, others did not. The at-home project for this week was to create a homemade musical instrument with their families. Out of the 26 students, 20 completed the assignment. The students then showed, discussed, and performed with their instrument. A weekly reflection was completed.

The following week the Visual/Spatial Intelligence was introduced. Students were asked to draw a setting to a descriptive story that was read to them. Cooperatively, students had to design a board game to go along with a story. Each group was presented a different story to use. The at-home activity was comprised of four toothpick puzzles that were completed by the students and their family members. Only 17 out of 26 students completed this activity at home. An entry was added to the reflection portfolio.

Week 8 began the Logical/Mathematical Intelligence. Activities including use of a variety of graphic organizers and personal shape analogies were used. The researcher over planned and was unable to complete the "Who was that?" activity attribute web. The students worked cooperatively to complete puzzles and brainteasers. The at-home activity was to have a "Family Game Night". Surprisingly, only 19 out of the 26 students completed this assignment. A reflection on working with the Logical/Mathematical Intelligence was done.

Week 9 of the plan had to be pushed back a week due to state testing. In this week, students learned about the Bodily/Kinesthetic Intelligence. The activities for this week included kickboxing the word wall words and tracing the students' bodies including

physical features. The cooperative activity for the week was to perform a play. An at-home activity of playing charades was assigned. This activity had the lowest participation from the class. Only 13 out of 26 students completed this activity. A reflection was filled out at the end of the week.

In week 10, the Naturalist Intelligence was introduced. Activities for this week included inviting a guest speaker in to discuss her pet and going on a nature scavenger hunt. Due to unforeseen circumstances, the field trip to the nature center was canceled. Cooperatively, the students were asked to design a scene they would see based on a certain habitat and create a picture window depicting that scene. The at-home activity for the week was to create a terrarium out of soda bottles. Twenty students completed this assignment.

In the last two weeks, the MI Inventory was re-administered and a final reflection was completed by each student (Appendix D). The results of the pre and postchecklists were compared, contrasted and recorded at this time.

Presentation and Analysis of Results

In order to assess the effects of the use of multiple intelligences and cooperative learning on student motivation to learn, the researchers compared second and third quarter report card grades. The data was graphed and analyzed and is presented in Figures 10, 11, and 12.

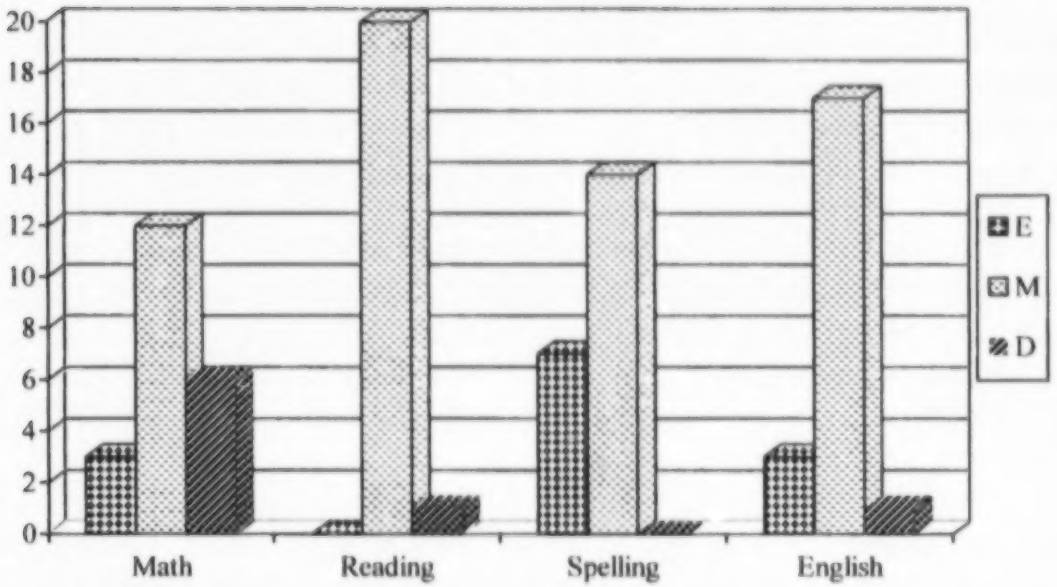

Figure 10. – Site A third quarter grades compare the number of students that exceeded, met, or did not meet expectations in math, reading, spelling, and English as to the second quarter (see Figure 1 on p. 9). Third quarter math grades reflect an increase in students who exceeded expectations, as well as, a slight improvement in children who moved to meeting expectations. Reading achievement increased for one student who met expectations during the third quarter. The two students who exceeded expectations in the second quarter dropped to meeting expectations. Spelling grades increased dramatically from second to third quarters with all students meeting or exceeding expectations. English grades improved overall with a slight increaser in the meets and exceeds categories.

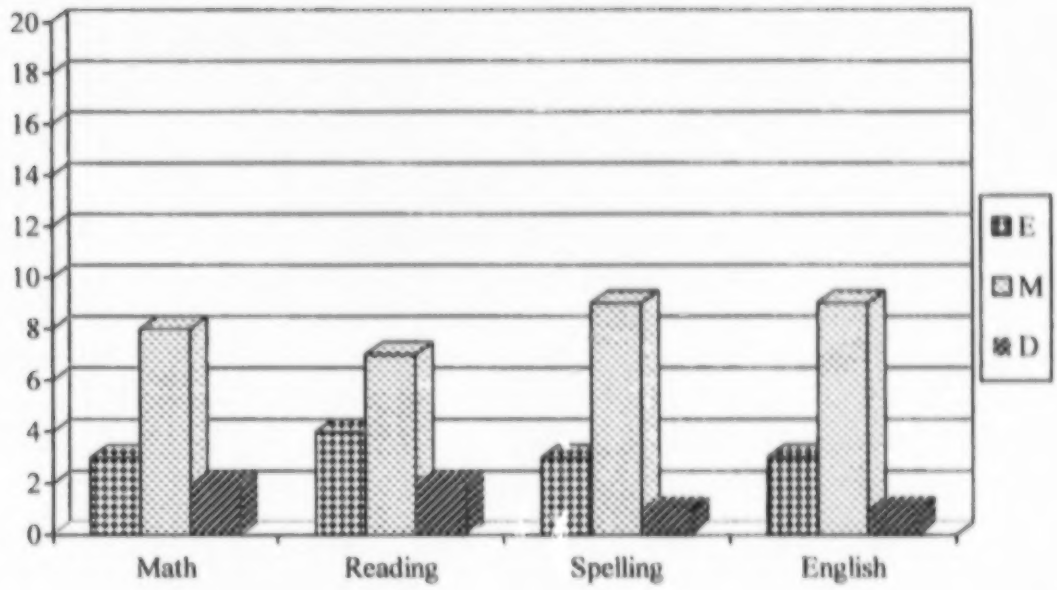

Figure 11. – Site B third quarter grades compare the number of students that exceeded, met, or did not meet expectations in math, reading, spelling, and English as to the second quarter (see Figure 2 on p. 10). In math a slight drop in grades was seen with two less students exceeding expectations, one more student meeting expectations, and one more student not meeting expectations. Reading grades relatively stayed the same with one less student meeting expectations. Spelling grades show an increase with three additional students meeting expectations in the third quarter. In English one more student exceeded expectations and two additional students met expectations.

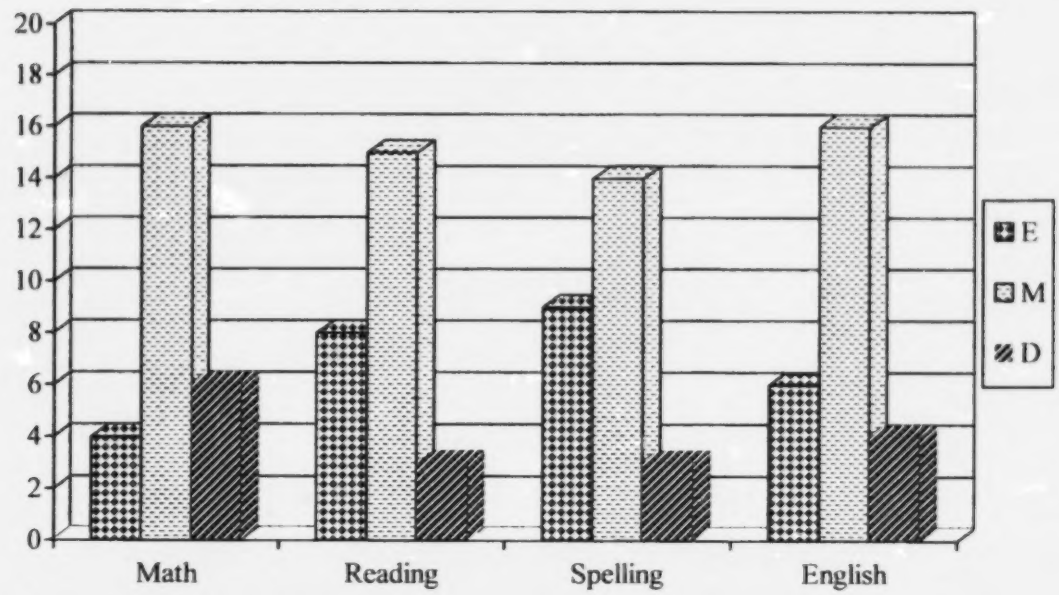

Figure 12. – Site C third quarter grades compare the number of students that exceeded, met, or did not meet expectations in math, reading, spelling, and English as to the second quarter (see Figure 3 on p. 11). In math the number of students exceeding expectations remained the same while the number of students meeting expectations slightly decreased. A minor increase in the number of students not meeting expectations in math was seen. Reading grades show there was a three student decrease in the exceeds column. A one student increase was seen in the meets column. Two additional students did not meet expectations in the third quarter. In spelling, an overall increase was observed. In English, a decrease of three students existed in meeting expectations. However, the number of students exceeding expectations increased by one. Two more students were added to the does not meet category this quarter.

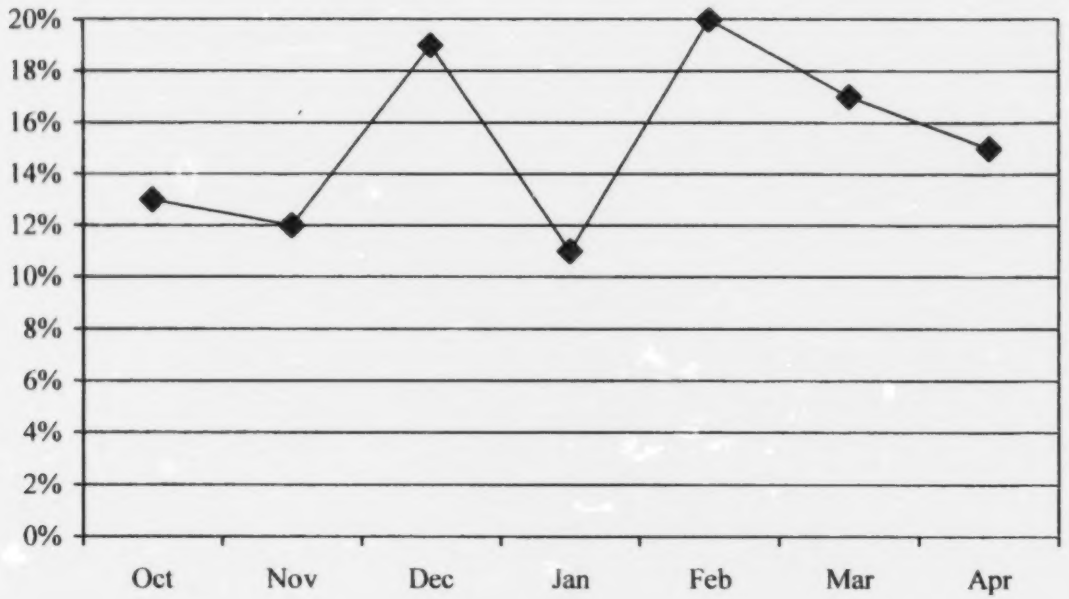

Figure 13. – Site A missing assignments records for the second and third quarters show an inconsistent pattern of complete assignments regardless of the action research plan implementation. For the second quarter, percentages of missing assignments altered slightly from October to November from 13% to 12%. There was a noticeable increase of missing assignments in December to 19%. At the onset of the action plan, the percentage of missing assignments in January dropped to 11%. A sharp rise to 20% took place in February with a gradual tapering to 17% in March and 15% in April.

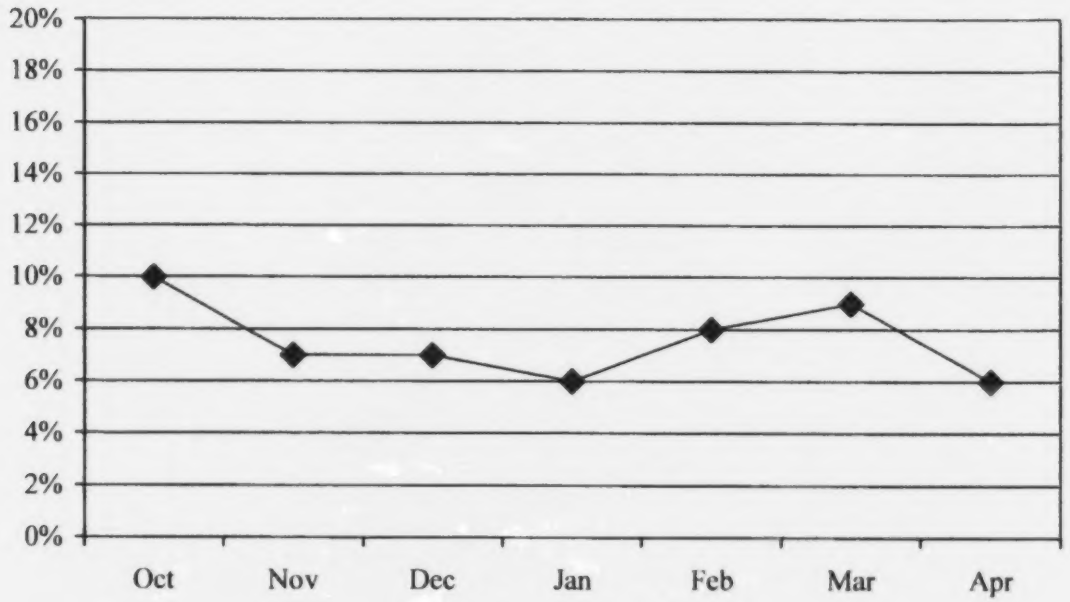

Figure 14. – Site B missing assignments records for the second and third quarters show a low yet fairly consistent pattern of incomplete assignments throughout the study. For the second quarter percentages of missing assignments altered slightly from October, November, and December from 10% to 7%. At the onset of the action plan the percentage of missing assignments in January dropped to 6%. A moderate rise to 8% in February and 9% in March followed. April concluded with only 6% of all assignments missing.

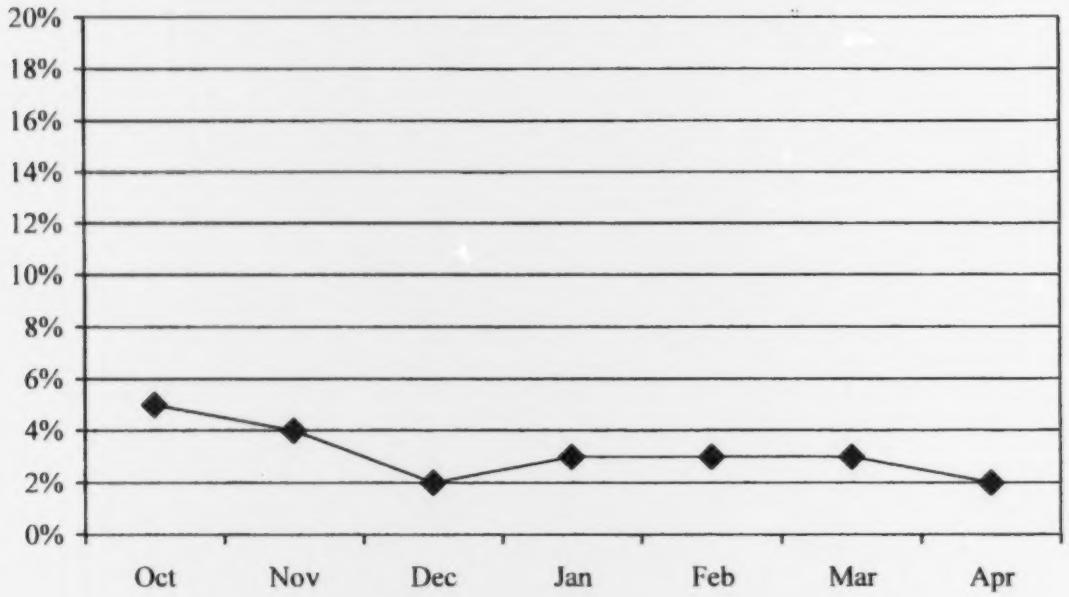

Figure 15. – Site C missing assignments records for the second and third quarters show a very low percentage of missing assignments throughout the seven months of tracking. In October 5% of all assignments were not handed in. The percentage dropped to 4% in November and only 2% in December. At the onset of the action plan the percentage of missing assignments in January raised to 3% and stayed there for the months of February and March. April concluded with only 2% of all assignments missing.

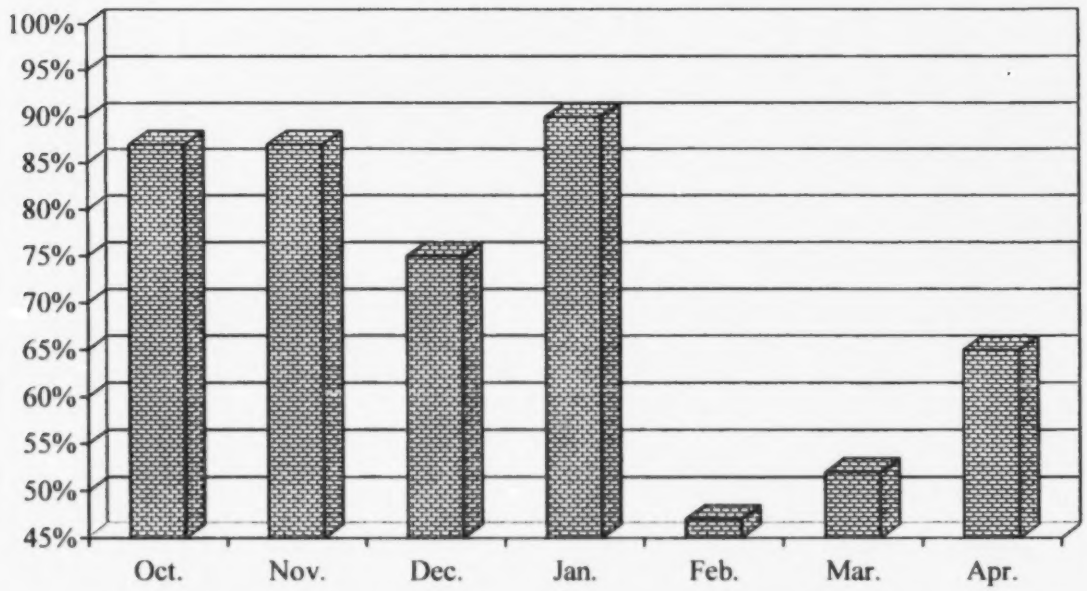

Figure 16. – Site A behavioral checklist for the second and third quarters shows the consistency in student behavior throughout the months of October to January. Respectively, 86% of the students earned the end of the month movie in October and November, 75% in December, and 90% in January. Student behavior dramatically declined in February to 47% shortly after the action research plan was implemented. The following months showed slight improvements with 52% earning the reward in March and 65% earning the reward in April.

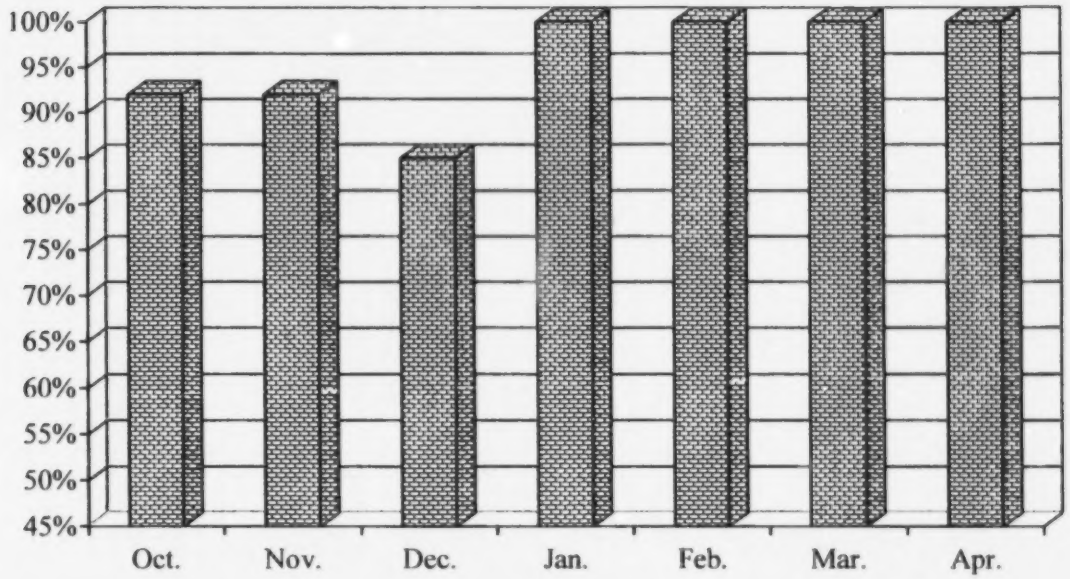

Figure 17. – Site B behavioral checklist for the second and third quarters shows 92% of the students were able to attend the monthly reward for good behavior in October and November. In December 85% of the students were rewarded. During the implementation of the action plan 100% of the students displayed behavior that earned the reward.

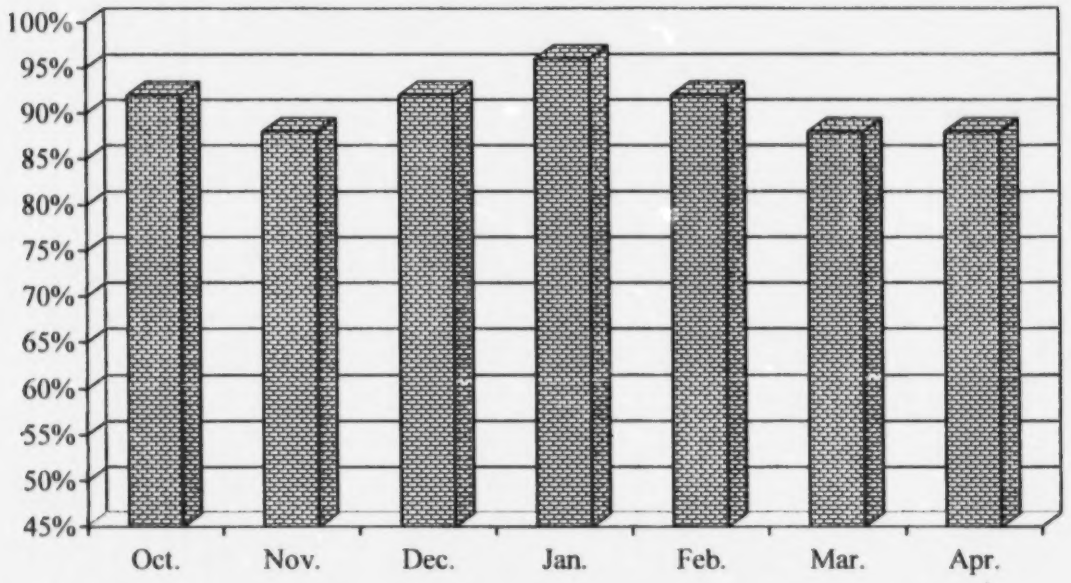

Figure 18. – Site C behavioral checklist for the second and third quarters shows above average behavior in students throughout the research study period. In the months of October, November, and December the percentage of the students earning the end of the month movie ranged from 88% to 92%. Appropriate behavior peaked at the onset of the action plan with 96% of the students seeing the monthly movie in January. The percentage dipped slightly for the remainder of the observation time from 92% in February to 88% in March and April.

Conclusions and Recommendations

Based on the presentation and analysis of the data on academic progress and behavior, the researchers noted an overall improvement in grades, yet behavioral results showed more discrepancies. More students met expectations after the implementation of the action plan. The researchers noted that in their past years of teaching, third quarter grades typically decline due to the introduction of more difficult concepts. However, the data indicates that more students improved despite the complexity of the material. We believe that due to the fact the students were given the opportunity to be mobile, to be engaged, and express their creativity, they became more motivated to learn. This motivation resulted in the improved grades. It should also be noted that the use of non-traditional assessments may have contributed to the improvement in grades. Cooperative learning seemed to allow students to express their knowledge in a non-competitive environment. This non-traditional testing however did require us to devote more time toward developing authentic assessments. When the students were given traditional assignments, such as homework, the motivation expressed in the classroom did not carry over.

Students' behavior varied according to grade level. The intermediate grade saw an alarming decline in positive behavior. The older students were not accustomed to having such academic freedom. It was hard for the older students to understand that learning could be fun and therefore they did not take some of the lessons seriously. The primary grades had better success at improving student behavior. More transference was shown throughout the action plan and beyond. We feel that the younger the students are the

more success a teacher will have in improving behavior. These results might have been different had the action research plan been initiated at the start of the school year.

We observed that parental involvement varied with the ages of the students used in this intervention. Parents of the younger children showed more enthusiasm and participation in the at-home activities than the parents of the intermediate students.

We recommend the implementation of the MI theory as a means for educators to motivate their students. It was evident to us that the children were enjoying the activities as well as the experience of learning. Many "light bulb moments" were witnessed. The teachers were able witnessed these moments due to the fact that after the initial cooperative learning lessons and introduction to D.O.V.E. guidelines, students worked more independently within their own group. The teacher then became more of a facilitator. The students started to teach each other and show their strengths. The researchers did recognize that the initial planning of the lessons was quite time consuming, however the preparation of instruction can be used for future classes and therefore can be viewed as time saving. One drawback that we noted was that we over planned our weekly activities. Some activities prompted such enthusiasm that we found ourselves behind schedule. Flexibility was a must when it came to learning.

It is our opinion that other educators would benefit from implementing cooperative learning and MI into their daily classroom lessons. We intend to continue to use these non-traditional methods to motivate our students' learning. It is our hope that we are the trendsetters to those who have seen our successes.

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Appendices

Appendix A
Behavioral Policy

January 11, 2002

Dear Parents,

As part of my classroom reward system for appropriate school behavior, the second grade students can now earn a monthly movie. For the remainder of the school year, I have developed a way to distinguish which children will or will not be able to view the movie. Each child will be counted individually and given daily points based on the color card they end up with at the end of each day.

Green = 3 pts.; White = 2 pts.; Yellow = 1 pt.; Red = 0 pts.

The total number of school days in each month will be multiplied by three and then averaged out to determine a B standard. Students will need to total between an A and B average in order to see the movie at the end of the month. For example, there are 17 school days in the month of January. (17 days x 3 pts. = 51 pts.) Since 80% is considered a B, each student will need to earn at least 41 points to view the movie. (51 x .8 = 40.8) Students who earn the movie will be allowed to bring a healthy snack to eat while viewing. I guarantee that only G rated videos will be shown. Students who do not earn the class movie will be sent to another room during that time.

I wanted to give the students more incentive to continue with the fine behavior they have already shown me this year. I hope you agree. If you have any questions regarding this new practice, feel free to contact me at school. Thank you very much.

Sincerely,

Appendix B
Behavioral Checklist

Behavioral Checklist

April

Name	8	9	10	11	12	15	16	17	18	19	22	23	TL pts
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

Point System
3 – good behavior throughout the day
2 – one warning given regarding behavior
1 – two warnings given regarding behavior
0 – three warnings given regarding behavior

Students must display 80% or better good behavior throughout the month to earn a class movie at the end of the month.

Total points possibly earned in April are 51. A student must receive at least 41 points to earn the class movie.

Percentage of students earning this month's movie is _____%.

Appendix C
MI Inventory

Multiple Intelligences Survey	Verbal/ Linguistic	Logical/ Mathematical	Visual/ Spatial	Musical/ Rhythmic	Bodily/ Kinesthetic	Naturalist	Interpersonal	Intrapersonal
1 **For fun, you like to....**	Read, write, play word games	Do puzzles	Paint or draw	Play an instrument, sing, listen to music	Be active, play sports, dance	Take care of pets	Be with family, friends, teammates	Spend quality time alone
2 **To memorize facts, you...**	Create a phrase or saying	Put facts in order	Picture the answer or draw it	Create a rhyme or song	Associate them with a gesture or movement	Think of nature to help you	Work with a partner	Relate the facts to personal experience
3 **If something breaks or won't work, you...**	Read the instruction book	Examine the pieces to figure how it works	Study the diagram	Snap, hum, or whistle while trying to fix it	Fiddle with the parts	Examine the parts carefully	Work with someone to fix it	Fix it yourself
4 **For a team presentation, you...**	Write the lines	Present to the class	Create a poster	Put words to a tune	Create a play	Choose a nature topic	Be the leader	Work alone on your part

_____ _____ _____ _____ _____ _____ _____ _____

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Multiple Intelligences Survey	Verbal/ Linguistic	Logical/ Mathematical	Visual/ Spatial	Musical/ Rhythmic	Bodily/ Kinesthetic	Naturalist	Interpersonal	Intrapersonal
5 When playing a board game, you...	Talk yourself through the move	Weigh the consequences of each move	Picture your next move	Keep with the rhythm of the game	Try out a number of moves	Think in terms of predator and prey	Think about others' moves	Make the move that feels right
6 You like games if you can...	Talk while playing	Use math skills	Draw	Have music playing	Be active, move around	Play outside	Play with others	Play solitaire or a game by yourself
7 For a present, you like a...	A book or magazine	Puzzles	Art supplies	CDs, concert tickets	Sports equipment	Pet, flowers, outdoor gear	Big party	Journal or diary
8 During free time, you like to...	Read or write	Solve problems	Draw, paint or make models	Listen to music, sing, play music	Work with your hands	Enjoy nature	Spend time with your friends	Be alone

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Appendix D
Final Reflection

Looking Back

My favorite intelligence was

_____.

I liked it because

_____

_____

_____

_____

The activities that I enjoyed doing the best were

_____

_____

_____

_____

The intelligence that I liked the least was

_____.

I did not like it because

_____

_____

_____

_____

The activities that I disliked the most were

_____

_____

_____

_____

_____

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